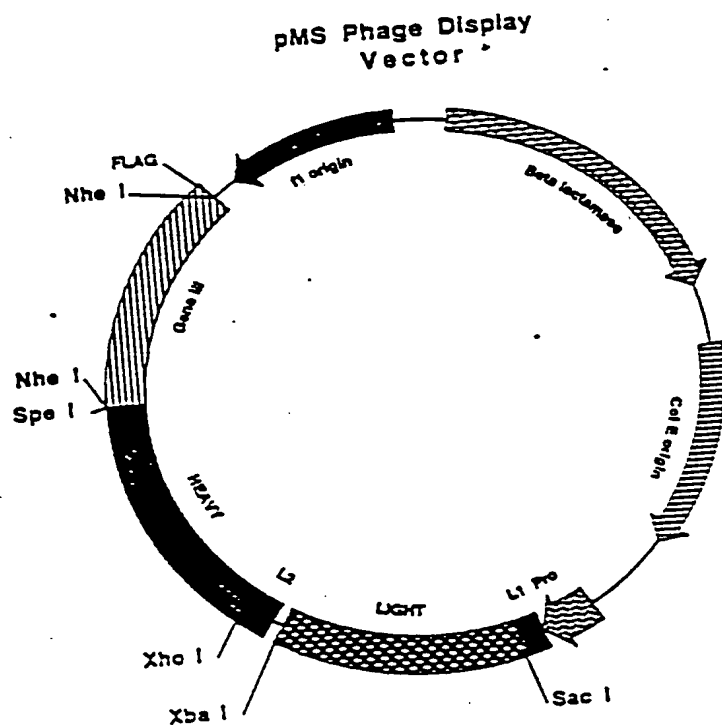


FIGURE 1

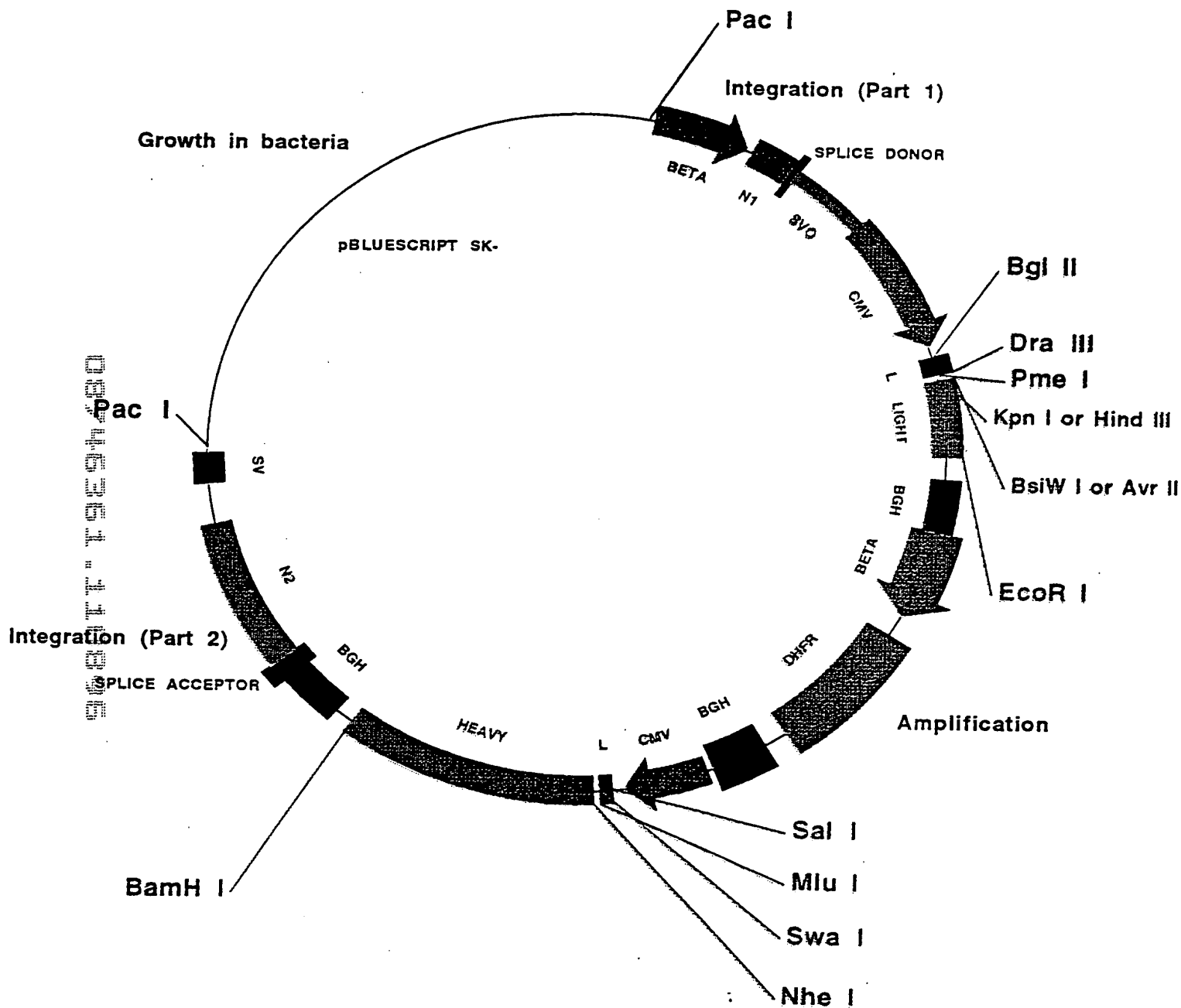
Figure 1: pMS Phage Display Vector. Pro = Lac Z promoter. L1 = Omp A leader. L2 = Pel B leader. Light = light chain. Heavy = heavy chain.



03746361.1.10896

FIGURE 2

NEOSPLA



- CMV = Cytomegalovirus promoter/enhancer
- BETA = Mouse Beta globin major promoter
- SVO = SV40 origin
- BGH = Bovine growth hormone polyadenylation
- SV = SV40 polyadenylation
- N1 = Neomycin phosphotransferase exon 1
- N2 = Neomycin phosphotransferase exon 2
- LIGHT = Human immunoglobulin kappa or lambda constant region
- DHFR = Dihydrofolate Reductase
- HEAVY = Human immunoglobulin gamma 1 or gamma 4 PE constant region
- L = Leader

FIGURE 3a

Length of 7C10 light/Primatized: 705 bp; Listed from: 1 to: 705;
 Translated from: 1 to: 703 (Entire region);
 Genetic Code used: Universal; Fri, May 26, 1995 11:11 AM

```

Frame 1  M   R   V   P   A   Q   L   L   G   L   L   L   L   W   L   P   G   A   R
          ATG AGG GTC CCC GCT CAG CTC CTG GGG CTC CTG CTG CTC TGG CTC CCA GGT GCA CGA
                   9                   18                   27                   36                   45                   54

C   A   Y   E   L   T   Q   P   P   S   V   S   V   S   P   G   Q   T   A   R   I
TGT GCC TAT GAA CTG ACT CAG CCA CCC TCG GTG TCA GTG TCC CCA GGA CAG ACG GCC AGG ATC
    63                   72                   81                   90                   99                   108                   117

T   C   G   G   D   N   S   R   N   E   Y   V   H   W   Y   Q   Q   K   P   A   R
ACC TGT GGG GGA GAC AAC AGT AGA AAT GAA TAT GTC CAC TGG TAC CAG CAG AAG CCA GCG CGG
    126                   135                   144                   153                   162                   171                   180

A   P   I   L   V   I   Y   D   D   S   D   R   P   S   G   I   P   E   R   F   S
GCC CCT ATA CTG GTC ATC TAT GAT GAT AGT GAC CGG CCC TCA GGG ATC CCT GAG CGA TTC TCT
    189                   198                   207                   216                   225                   234                   243

G   S   K   S   G   N   T   A   T   L   T   I   N   G   V   E   A   G   D   E   A
GGC TCC AAA TCA GGG AAC ACC GCC ACC CTG ACC ATC AAC GGG GTC GAG GCC GGG GAT GAG GCT
    252                   261                   270                   279                   288                   297                   306

D   Y   Y   C   Q   V   W   D   R   A   S   D   H   P   V   F   G   G   G   T   R
GAC TAT TAC TGT CAG GTG TGG GAC AGG GCT AGT GAT CAT CCG GTC TTC GGA GGA GGG ACC CGG
    315                   324                   333                   342                   351                   360                   369

V   T   V   L   G   Q   P   K   A   A   P   S   V   T   L   F   P   P   S   S   E
GTG ACC GTC CTA GGT CAG CCC AAG GCT GCC CCC TCG GTC ACT CTG TTC CCG CCC TCC TCT GAG
    378                   387                   396                   405                   414                   423                   432

E   L   Q   A   N   K   A   T   L   V   C   L   I   S   D   F   Y   P   G   A   V
GAG CTT CAA GCC AAC AAG GCC ACA CTG GTG TGT CTC ATA AGT GAC TTC TAC CCG GGA GCC GTG
    441                   450                   459                   468                   477                   486                   495

T   V   A   W   K   A   D   S   S   P   V   K   A   G   V   E   T   T   T   P   S
ACA GTG GCC TGG AAG GCA GAT AGC AGC CCC GTC AAG GCG GGA GTG GAG ACC ACC ACA CCC TCC
    504                   513                   522                   531                   540                   549                   558

K   Q   S   N   N   K   Y   A   A   S   S   Y   L   S   L   T   P   E   Q   W   K
AAA CAA AGC AAC AAC AAG TAC GCG GCC AGC AGC TAC CTG AGC CTG ACG CCT GAG CAG TGG AAG
    567                   576                   585                   594                   603                   612                   621

S   H   R   S   Y   S   C   Q   V   T   H   E   G   S   T   V   E   K   T   V   A
TCC CAC AGA AGC TAC AGC TGC CAG GTC ACG CAT GAA GGG AGC ACC GTG GAG AAG ACA GTG GCC
    630                   639                   648                   657                   666                   675                   684

P   T   E   C   S
CCT ACA GAA TGT TCA TGA
    693                   702
  
```

FIGURE 3b

Length of 7C10 heavy/Primatized: 1431 bp; Listed from: 1 to: 1431;
 Translated from: 1 to: 1429 (Entire region);
 Genetic Code used: Universal; Fri, May 26, 1995 11:11 AM

Frame 1 M K H L W F F L L L V A A P R W V L S
 ATG AAA CAC CTG TGG TTC TTC CTC CTC CTG GTG GCA GCT CCC AGA TGG GTC CTG TCC
 9 18 27 36 45 54
 Q V K L Q Q W G E G L L Q P S E T L S R T
 CAG GTG AAG CTG CAG CAG TGG GGC GAA GGA CTT CTG CAG CCT TCG GAG ACC CTG TCC CGC ACC
 63 72 81 90 99 108 117
 C V V S G G S I S G Y Y Y W T W I R Q T P
 TGC GTT GTC TCT GGT GGC TCC ATC AGC GGT TAC TAC TAC TGG ACC TGG ATC CGC CAG ACC CCA
 126 135 144 153 162 171 180
 G R G L E W I G H I Y G N G A T T N Y N P
 GGG AGG GGA CTG GAG TGG ATT GGC CAT ATT TAT GGT AAT GGT GCG ACC ACC AAC TAC AAT CCC
 189 198 207 216 225 234 243
 S L K S R V T I S K D T S K N Q F F L N L
 TCC CTC AAG AGT CGA GTC ACC ATT TCA AAA GAC ACG TCC AAG AAC CAG TTC TTC CTG AAC TTG
 252 261 270 279 288 297 306
 N S V T D A D T A V Y Y C A R G P R P D C
 AAT TCT GTG ACC GAC GCG GAC ACG GCC GTC TAT TAC TGT GCG AGA GGC CCT CGC CCT GAT TGC
 315 324 333 342 351 360 369
 T T I C Y G G W V D V W G P G D L V T V S
 ACA ACC ATT TGT TAT GGC GGC TGG GTC GAT GTC TGG GGC CCG GGA GAC CTG GTC ACC GTC TCC
 378 387 396 405 414 423 432
 S A S T K G P S V F P L A P S S K S T S G
 TCA GCT AGC ACC AAG GGC CCA TCG GTC TTC CCC CTG GCA CCC TCC TCC AAG AGC ACC TCT GGG
 441 450 459 468 477 486 495
 G T A A L G C L V K D Y F P E P V T V S W
 GGC ACA GCG GCC CTG GGC TGC CTG GTC AAG GAC TAC TTC CCC GAA CCG GTG ACG GTG TCG TGG
 504 513 522 531 540 549 558
 N S G A L T S G V H T F P A V L Q S S G L
 AAC TCA GGC GCC CTG ACC AGC GGC GTG CAC ACC TTC CCG GCT GTC CTA CAG TCC TCA GGA CTC
 567 576 585 594 603 612 621
 Y S L S S V V T V P S S S L G T Q T Y I C
 TAC TCC CTC AGC AGC GTG GTG ACC GTG CCC TCC AGC AGC TTG GGC ACC CAG ACC TAC ATC TGC
 630 639 648 657 666 675 684
 N V N H K P S N T K V D K K A E P K S C D
 AAC GTG AAT CAC AAG CCC AGC AAC ACC AAG GTG GAC AAG AAA GCA GAG CCC AAA TCT TGT GAC
 693 702 711 720 729 738 747
 K T H T C P P C P A P E L L G G P S V F L
 AAA ACT CAC ACA TGC CCA CCG TGC CCA GCA CCT GAA CTC CTG GGG GGA CCG TCA GTC TTC CTC
 756 765 774 783 792 801 810
 F P P K P K D T L M I S R T P E V T C V V
 TTC CCC CCA AAA CCC AAG GAC ACC CTC ATG ATC TCC CGG ACC CCT GAG GTC ACA TGC GTG GTG
 819 828 837 846 855 864 873
 V D V S H E D P E V K F N W Y V D G V E V
 GTG GAC GTG AGC CAC GAA GAC CCT GAG GTC AAG TTC AAC TGG TAC GTG GAC GGC GTG GAG GTG
 882 891 900 909 918 927 936

FIGURE 3b (Continued)

| | | | | | | | | | | | | | | | | | | | | |
|------|-----|-----|-----|------|-----|-----|------|-----|-----|------|-----|-----|------|-----|-----|------|-----|-----|------|-----|
| H | N | A | K | T | K | P | R | E | E | Q | Y | N | S | T | Y | R | V | V | S | V |
| CAT | AAT | GCC | AAG | ACA | AAG | CCG | CGG | GAG | GAG | CAG | TAC | AAC | AGC | ACG | TAC | CGT | GTG | GTC | AGC | GTC |
| 945 | | | | 954 | | | 963 | | | 972 | | | 981 | | | 990 | | | 999 | |
| L | T | V | L | H | Q | D | W | L | N | G | K | E | Y | K | C | K | V | S | N | K |
| CTC | ACC | GTC | CTG | CAC | CAG | GAC | TGG | CTG | AAT | GGC | AAG | GAG | TAC | AAG | TGC | AAG | GTG | TCC | AAC | AAA |
| 1008 | | | | 1017 | | | 1026 | | | 1035 | | | 1044 | | | 1053 | | | 1062 | |
| A | L | P | A | P | I | E | K | T | I | S | K | A | K | G | Q | P | R | E | P | Q |
| GCC | CTC | CCA | GCC | CCC | ATC | GAG | AAA | ACC | ATC | TCC | AAA | GCC | AAA | GGG | CAG | CCC | CGA | GAA | CCA | CAG |
| 1071 | | | | 1080 | | | 1089 | | | 1098 | | | 1107 | | | 1116 | | | 1125 | |
| V | Y | T | L | P | P | S | R | D | E | L | T | K | N | Q | V | S | L | T | C | L |
| GTG | TAC | ACC | CTG | CCC | CCA | TCC | CGG | GAT | GAG | CTG | ACC | AAG | AAC | CAG | GTG | AGC | CTG | ACC | TGC | CTG |
| 1134 | | | | 1143 | | | 1152 | | | 1161 | | | 1170 | | | 1179 | | | 1188 | |
| V | K | G | F | Y | P | S | D | I | A | V | E | W | E | S | N | G | Q | P | E | N |
| GTC | AAA | GGC | TTC | TAT | CCC | AGC | GAC | ATC | GCC | GTG | GAG | TGG | GAG | AGC | AAT | GGG | CAG | CCG | GAG | AAC |
| 1197 | | | | 1206 | | | 1215 | | | 1224 | | | 1233 | | | 1242 | | | 1251 | |
| N | Y | K | T | T | P | P | V | L | D | S | D | G | S | F | F | L | Y | S | K | L |
| AAC | TAC | AAG | ACC | ACG | CCT | CCC | GTG | CTG | GAC | TCC | GAC | GGC | TCC | TTC | TTC | CTC | TAC | AGC | AAG | CTC |
| 1260 | | | | 1269 | | | 1278 | | | 1287 | | | 1296 | | | 1305 | | | 1314 | |
| T | V | D | K | S | R | W | Q | Q | G | N | V | F | S | C | S | V | M | H | E | A |
| ACC | GTG | GAC | AAG | AGC | AGG | TGG | CAG | CAG | GGG | AAC | GTG | TTC | TCA | TGC | TCC | GTG | ATG | CAT | GAG | GCT |
| 1323 | | | | 1332 | | | 1341 | | | 1350 | | | 1359 | | | 1368 | | | 1377 | |
| L | H | N | H | Y | T | Q | K | S | L | S | L | S | P | G | K | . | | | | |
| CTG | CAC | AAC | CAC | TAC | ACG | CAG | AAG | AGC | CTC | TCC | CTG | TCT | CCG | GGT | AAA | TGA | | | | |
| 1386 | | | | 1395 | | | 1404 | | | 1413 | | | 1422 | | | 1431 | | | | |

FIGURE 4a

Length of 7B6 light/Primatized: 720 bp; Listed from: 1 to: 720;
 Translated from: 1 to: 718 (Entire region);
 Genetic Code used: Universal; Fri, May 26, 1995 11:10 AM

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Frame 1  M   S   L   P   A   Q   L   L   G   L   L   L   L   C   V   P   G   S   S
          ATG AGC CTC CCT GCT CAG CTC CTC GGG CTG CTA TTG CTC TGC GTC CCC GGG TCC TCC AGT
                        9                18                27                36                45                54

G   E   V   V   M   T   Q   S   P   L   S   L   P   I   T   P   G   E   P   A   S
GGG GAA GTT GTG ATG ACT CAG TCT CCA CTG TCC CTT CCC ATC ACA CCT GGA GAG CCG GCC TCC
    63                72                81                90                99                108                117

I   S   C   R   S   S   Q   S   L   K   H   S   N   G   D   T   F   L   S   W   Y
ATC TCC TGT AGG TCT AGT CAA AGC CTT AAA CAC AGT AAT GGA GAC ACC TTC CTG AGT TGG TAT
    126                135                144                153                162                171                180

Q   Q   K   P   G   Q   P   P   R   L   L   I   Y   K   V   S   N   R   D   S   G
CAG CAG AAG CCA GGC CAA CCT CCA AGG CTC CTG ATT TAT AAG GTT TCT AAC CGG GAC TCT GGG
    189                198                207                216                225                234                243

V   P   D   R   F   S   G   S   G   A   G   T   D   F   T   L   K   I   S   A   V
GTC CCA GAC AGA TTC AGC GGC AGT GGG GCA GGG ACA GAT TTC ACA CTG AAA ATC AGC GCA GTG
    252                261                270                279                288                297                306

E   A   E   D   V   G   V   Y   F   C   G   Q   G   T   R   T   P   P   T   F   G
GAG GCT GAA GAT GTT GGG GTT TAT TTC TGC GGG CAA GGT ACA AGG ACT CCT CCC ACT TTC GGC
    315                324                333                342                351                360                369

G   G   T   K   V   E   I   K   R   T   V   A   A   P   S   V   F   I   F   P   P
GGA GGG ACC AAG GTG GAA ATC AAA CGT ACG GTG GCT GCA CCA TCT GTC TTC ATC TTC CCG CCA
    378                387                396                405                414                423                432

S   D   E   Q   L   K   S   G   T   A   S   V   V   C   L   L   N   N   F   Y   P
TCT GAT GAG CAG TTG AAA TCT GGA ACT GCC TCT GTT GTG TGC CTG CTG AAT AAC TTC TAT CCC
    441                450                459                468                477                486                495

R   E   A   K   V   Q   W   K   V   D   N   A   L   Q   S   G   N   S   Q   E   S
AGA GAG GCC AAA GTA CAG TGG AAG GTG GAT AAC GCC CTC CAA TCG GGT AAC TCC CAG GAG AGT
    504                513                522                531                540                549                558

V   T   E   Q   D   S   K   D   S   T   Y   S   L   S   S   T   L   T   L   S   K
GTC ACA GAG CAG GAC AGC AAG GAC AGC ACC TAC AGC CTC AGC AGC ACC CTG ACG CTG AGC AAA
    567                576                585                594                603                612                621

A   D   Y   E   K   H   K   V   Y   A   C   E   V   T   H   Q   G   L   S   S   P
GCA GAC TAC GAG AAA CAC AAA GTC TAC GCC TGC GAA GTC ACC CAT CAG GGC CTG AGC TCG CCC
    630                639                648                657                666                675                684

V   T   K   S   F   N   R   G   E   C
GTC ACA AAG AGC TTC AAC AGG GGA GAG TGT TGA
    693                702                711                720
  
```

FIGURE 4b

Length of 7B6 heavy/Primatized: 1437 bp; Listed from: 1 to: 1437;
 Translated from: 1 to: 1435 (Entire region);
 Genetic Code used: Universal; Fri, May 26, 1995 11:09 AM

| | | | | | | | | | | | | | | | | | | | | |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Frame 1 | M | G | W | S | L | I | L | L | F | L | V | A | V | A | T | R | V | Q | C | |
| | ATG | GGT | TGG | AGC | CTC | ATC | TTG | CTC | TTC | CTT | GTC | GCT | GTT | GCT | ACG | CGT | GTC | CAG | TGT | |
| | | | 9 | | | 18 | | | 27 | | | 36 | | | 45 | | | 54 | | |
| E | V | Q | L | V | E | S | G | G | G | L | V | Q | P | G | G | S | L | R | V | S |
| GAG | GTG | CAA | CTG | GTG | GAG | TCT | GGG | GGA | GGC | TTG | GTC | CAG | CCT | GGC | GGG | TCC | CTG | AGA | VTC | TCC |
| | 63 | | | 72 | | | 81 | | | 90 | | | 99 | | | 108 | | | 117 | |
| C | A | V | S | G | F | T | F | S | D | H | Y | M | Y | W | F | R | Q | A | P | G |
| TGT | GCA | GTC | TCT | GGA | TTC | ACC | TTC | AGT | GAC | CAC | TAC | ATG | TAT | TGG | TTC | CGC | CAG | GCT | CCA | GGG |
| | 126 | | | 135 | | | 144 | | | 153 | | | 162 | | | 171 | | | 180 | |
| K | G | P | E | W | V | G | F | I | R | N | K | P | N | G | G | T | T | E | Y | A |
| AAG | GGG | CCG | GAA | TGG | GTA | GGT | TTC | ATT | AGA | AAC | AAA | CCG | AAC | GGT | GGG | ACA | ACA | GAA | TAC | GCC |
| | 189 | | | 198 | | | 207 | | | 216 | | | 225 | | | 234 | | | 243 | |
| A | S | V | K | D | R | F | T | I | S | R | D | D | S | K | S | I | A | Y | L | Q |
| GCG | TCT | GTG | AAA | GAC | AGA | TTC | ACC | ATC | TCC | AGA | GAT | GAT | TCC | AAA | AGC | ATC | GCC | TAT | CTG | CAA |
| | 252 | | | 261 | | | 270 | | | 279 | | | 288 | | | 297 | | | 306 | |
| M | S | S | L | K | I | E | D | T | A | V | Y | Y | C | T | T | S | Y | I | S | H |
| ATG | AGC | AGC | CTG | AAA | ATC | GAG | GAC | ACG | GCC | GTC | TAT | TAC | TGT | ACT | ACA | TCC | TAC | ATT | TCA | CAT |
| | 315 | | | 324 | | | 333 | | | 342 | | | 351 | | | 360 | | | 369 | |
| C | R | G | G | V | C | Y | G | G | Y | F | E | F | W | G | Q | G | A | L | V | T |
| TGT | CGG | GGT | GGT | GTC | TGC | TAT | GGA | GGT | TAC | TTC | GAA | TTC | TGG | GGC | CAG | GGC | GCC | CTG | GTC | ACC |
| | 378 | | | 387 | | | 396 | | | 405 | | | 414 | | | 423 | | | 432 | |
| V | S | S | A | S | T | K | G | P | S | V | F | P | L | A | P | S | S | K | S | T |
| GTC | TCC | TCA | GCT | AGC | ACC | AAG | GGC | CCA | TCG | GTC | TTC | CCC | CTG | GCA | CCC | TCC | TCC | AAG | AGC | ACC |
| | 441 | | | 450 | | | 459 | | | 468 | | | 477 | | | 486 | | | 495 | |
| S | G | G | T | A | A | L | G | C | L | V | K | D | Y | F | P | E | P | V | T | V |
| TCT | GGG | GGC | ACA | GCG | GCC | CTG | GGC | TGC | CTG | GTC | AAG | GAC | TAC | TTC | CCC | GAA | CCG | GTG | ACG | GTG |
| | 504 | | | 513 | | | 522 | | | 531 | | | 540 | | | 549 | | | 558 | |
| S | W | N | S | G | A | L | T | S | G | V | H | T | F | P | A | V | L | Q | S | S |
| TCG | TGG | AAC | TCA | GGC | GCC | CTG | ACC | AGC | GGC | GTG | CAC | ACC | TTC | CCG | GCT | GTC | CTA | CAG | TCC | TCA |
| | 567 | | | 576 | | | 585 | | | 594 | | | 603 | | | 612 | | | 621 | |
| G | L | Y | S | L | S | S | V | V | T | V | P | S | S | S | L | G | T | Q | T | Y |
| GGA | CTC | TAC | TCC | CTC | AGC | AGC | GTG | GTG | ACC | GTG | CCC | TCC | AGC | AGC | TTG | GGC | ACC | CAG | ACC | TAC |
| | 630 | | | 639 | | | 648 | | | 657 | | | 666 | | | 675 | | | 684 | |
| I | C | N | V | N | H | K | P | S | N | T | K | V | D | K | K | A | E | P | K | S |
| ATC | TGC | AAC | GTG | AAT | CAC | AAG | CCC | AGC | AAC | ACC | AAG | GTG | GAC | AAG | AAA | GCA | GAG | CCC | AAA | TCT |
| | 693 | | | 702 | | | 711 | | | 720 | | | 729 | | | 738 | | | 747 | |
| C | D | K | T | H | T | C | P | P | C | P | A | P | E | L | L | G | G | P | S | V |
| TGT | GAC | AAA | ACT | CAC | ACA | TGC | CCA | CCG | TGC | CCA | GCA | CCT | GAA | CTC | CTG | GGG | GGA | CCG | TCA | GTC |
| | 756 | | | 765 | | | 774 | | | 783 | | | 792 | | | 801 | | | 810 | |
| F | L | F | P | P | K | P | K | D | T | L | M | I | S | R | T | P | E | V | T | C |
| TTC | CTC | TTC | CCC | CCA | AAA | CCC | AAG | GAC | ACC | CTC | ATG | ATC | TCC | CGG | ACC | CCT | GAG | GTC | ACA | TGC |
| | 819 | | | 828 | | | 837 | | | 846 | | | 855 | | | 864 | | | 873 | |
| V | V | V | D | V | S | H | E | D | P | E | V | K | F | N | W | Y | V | D | G | V |
| GTG | GTG | GTG | GAC | GTG | AGC | CAC | GAA | GAC | CCT | GAG | GTC | AAG | TTC | AAC | TGG | TAC | GTG | GAC | GGC | GTG |
| | 882 | | | 891 | | | 900 | | | 909 | | | 918 | | | 927 | | | 936 | |

FIGURE 4b (Continued)

| | | | | | | | | | | | | | | | | | | | | |
|-----|------|-----|-----|------|-----|-----|------|-----|-----|------|-----|-----|------|-----|-----|------|-----|-----|------|-----|
| E | V | H | N | A | K | T | K | P | R | E | E | Q | Y | N | S | T | Y | R | V | V |
| GAG | GTG | CAT | AAT | GCC | AAG | ACA | AAG | CCG | CGG | GAG | GAG | CAG | TAC | AAC | AGC | ACG | TAC | CGT | GTG | GTC |
| | 945 | | | 954 | | | 963 | | | 972 | | | 981 | | | 990 | | | 999 | |
| S | V | L | T | V | L | H | Q | D | W | L | N | G | K | E | Y | K | C | K | V | S |
| AGC | GTC | CTC | ACC | GTC | CTG | CAC | CAG | GAC | TGG | CTG | AAT | GGC | AAG | GAG | TAC | AAG | TGC | AAG | GTC | TCC |
| | 1008 | | | 1017 | | | 1026 | | | 1035 | | | 1044 | | | 1053 | | | 1062 | |
| N | K | A | L | P | A | P | I | E | K | T | I | S | K | A | K | G | Q | P | R | E |
| AAC | AAA | GCC | CTC | CCA | GCC | CCC | ATC | GAG | AAA | ACC | ATC | TCC | AAA | GCC | AAA | GGG | CAG | CCC | CGA | GAA |
| | 1071 | | | 1080 | | | 1089 | | | 1098 | | | 1107 | | | 1116 | | | 1125 | |
| P | Q | V | Y | T | L | P | P | S | R | D | E | L | T | K | N | Q | V | S | L | T |
| CCA | CAG | GTG | TAC | ACC | CTG | CCC | CCA | TCC | CGG | GAT | GAG | CTG | ACC | AAG | AAC | CAG | GTC | AGC | CTG | ACC |
| | 1134 | | | 1143 | | | 1152 | | | 1161 | | | 1170 | | | 1179 | | | 1188 | |
| C | L | V | K | G | F | Y | P | S | D | I | A | V | E | W | E | S | N | G | Q | P |
| TGC | CTG | GTC | AAA | GGC | TTC | TAT | CCC | AGC | GAC | ATC | GCC | GTG | GAG | TGG | GAG | AGC | AAT | GGG | CAG | CCG |
| | 1197 | | | 1206 | | | 1215 | | | 1224 | | | 1233 | | | 1242 | | | 1251 | |
| E | N | N | Y | K | T | T | P | P | V | L | D | S | D | G | S | F | F | L | Y | S |
| GAG | AAC | AAC | TAC | AAG | ACC | ACG | CCT | CCC | GTG | CTG | GAC | TCC | GAC | GGC | TCC | TTC | TTC | CTC | TAC | AGC |
| | 1260 | | | 1269 | | | 1278 | | | 1287 | | | 1296 | | | 1305 | | | 1314 | |
| K | L | T | V | D | K | S | R | W | Q | Q | G | N | V | F | S | C | S | V | M | H |
| AAG | CTG | ACC | GTG | GAC | AAG | AGC | AGG | TGG | CAG | CAG | GGG | AAC | GTC | TTC | TCA | TGC | TCC | GTG | ATG | CAT |
| | 1323 | | | 1332 | | | 1341 | | | 1350 | | | 1359 | | | 1368 | | | 1377 | |
| E | A | L | H | N | H | Y | T | Q | K | S | L | S | L | S | P | G | K | . | | |
| GAG | GCT | CTG | CAC | AAC | CAC | TAC | ACG | CAG | AAG | AGC | CTC | TCC | CTG | TCT | CCG | GGT | AAA | TGA | | |
| | 1386 | | | 1395 | | | 1404 | | | 1413 | | | 1422 | | | 1431 | | | | |

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| | | | | | | | | | | | | | | | | | | | |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Frame | M | R | V | P | A | Q | L | L | G | L | L | L | L | W | L | P | G | A | R |
| 1 | ATG | AGG | GTC | CCC | GCT | CAG | CTC | CTG | GGG | CTC | CTG | CTC | TGG | CTC | CCA | GGT | GCA | CGA | |
| | | | 9 | | | 18 | | | 27 | | | | 36 | | 45 | | | 54 | |
| C | E | S | V | L | T | Q | P | P | S | V | S | G | A | P | G | Q | K | V | T |
| TGT | GAG | TCT | GTC | CTG | ACA | CAG | CCG | CCC | TCA | GTG | TCT | GGG | GCC | CCA | GGG | CAG | AAG | GTC | ACC |
| | 63 | | | 72 | | | 81 | | | 90 | | | 99 | | | 108 | | | 117 |
| S | C | T | G | S | T | S | N | I | G | G | Y | D | L | H | W | Y | Q | Q | L |
| TCG | TGC | ACT | GGG | AGC | ACC | TCC | AAC | ATT | GGA | GGT | TAT | GAT | CTA | CAT | TGG | TAC | CAG | CAG | CTC |
| | 126 | | | 135 | | | 144 | | | 153 | | | 162 | | | 171 | | | 180 |
| G | T | A | P | K | L | L | I | Y | D | I | N | K | R | P | S | G | I | S | D |
| GGA | ACG | GCC | CCC | AAA | CTC | CTC | ATC | TAT | GAC | ATT | AAC | AAG | CGA | CCC | TCA | GGA | ATT | TCT | GAC |
| | 189 | | | 198 | | | 207 | | | 216 | | | 225 | | | 234 | | | 243 |
| F | S | G | S | K | S | G | T | A | A | S | L | A | I | T | G | L | Q | T | E |
| TTC | TCT | GGC | TCC | AAG | TCT | GGT | ACC | GCG | GCC | TCC | CTG | GCC | ATC | ACT | GGG | CTC | CAG | ACT | GAG |
| | 252 | | | 261 | | | 270 | | | 279 | | | 288 | | | 297 | | | 306 |
| E | A | D | Y | Y | C | Q | S | Y | D | S | S | L | N | A | Q | V | F | G | G |
| GAG | GCT | GAT | TAT | TAC | TGC | CAG | TCC | TAT | GAC | AGC | AGC | CTG | AAT | GCT | CAG | GTA | TTC | GGA | GGA |
| | 315 | | | 324 | | | 333 | | | 342 | | | 351 | | | 360 | | | 369 |
| T | R | L | T | V | L | G | Q | P | K | A | A | P | S | V | T | L | F | P | P |
| ACC | CGC | CTG | ACC | GTC | CTA | GGT | CAG | CCC | AAG | GCT | GCC | CCC | TCG | GTC | ACT | CTG | TTC | CCG | CCC |
| | 378 | | | 387 | | | 396 | | | 405 | | | 414 | | | 423 | | | 432 |
| S | E | E | L | Q | A | N | K | A | T | L | V | C | L | I | S | D | F | Y | P |
| TCT | GAG | GAG | CTT | CAA | GCC | AAC | AAG | GCC | ACA | CTG | GTG | TGT | CTC | ATA | AGT | GAC | TTC | TAC | CCG |
| | 441 | | | 450 | | | 459 | | | 468 | | | 477 | | | 486 | | | 495 |
| A | V | T | V | A | W | K | A | D | S | S | P | V | K | A | G | V | E | T | T |
| GCC | GTG | ACA | GTG | GCC | TGG | AAG | GCA | GAT | AGC | AGC | CCC | GTC | AAG | GCG | GGA | GTG | GAG | ACC | ACC |
| | 504 | | | 513 | | | 522 | | | 531 | | | 540 | | | 549 | | | 558 |
| P | S | K | Q | S | N | N | K | Y | A | A | S | S | Y | L | S | L | T | P | E |
| CCC | TCC | AAA | CAA | AGC | AAC | AAC | AAG | TAC | GCG | GCC | AGC | AGC | TAC | CTG | AGC | CTG | ACG | CCT | GAG |
| | 567 | | | 576 | | | 585 | | | 594 | | | 603 | | | 612 | | | 621 |
| W | K | S | H | R | S | Y | S | C | Q | V | T | H | E | G | S | T | V | E | K |
| TGG | AAG | TCC | CAC | AGA | AGC | TAC | AGC | TGC | CAG | GTC | ACG | CAT | GAA | GGG | AGC | ACC | GTG | GAG | AAG |
| | 630 | | | 639 | | | 648 | | | 657 | | | 666 | | | 675 | | | 684 |
| V | A | P | T | E | C | S | . | | | | | | | | | | | | |
| GTG | GCC | CCT | ACA | GAA | TGT | TCA | TGA | | | | | | | | | | | | |
| | 693 | | | 702 | | | 711 | | | | | | | | | | | | |

FIGURE 5b

Length of 16C10 heavy/primatized: 1431 bp;
 Listed from: 1 to: 1431;
 Translated from: 1 to: 1429 (Entire region);
 Genetic Code used: Universal; Fri, May 26, 1995 11:08 AM

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Frame 1  M  K  H  L  W  F  F  L  L  L  V  A  A  P  R  W  V  L  S
          ATG AAA CAC CTG TGG TTC TTC CTC CTC CTG GTG GCA GCT CCC AGA TGG GTC CTG TCC
                9                18                27                36                45                54

Q  V  Q  L  Q  E  S  G  P  G  L  V  K  P  S  E  T  L  S  L  T
CAG GTG CAG CTG CAG GAG TCG GGC CCA GGA CTG GTG AAG CCT TCG GAG ACC CTG TCC CTC ACC
    63                72                81                90                99                108                117

C  A  V  S  G  G  S  I  S  G  G  Y  G  W  G  W  I  R  Q  P  P
TGC GCT GTC TCT GGT GGC TCC ATC AGC GGT GGT TAT GGC TGG GGC TGG ATC CGC CAG CCC CCA
    126                135                144                153                162                171                180

G  K  G  L  E  W  I  G  S  F  Y  S  S  S  G  N  T  Y  Y  N  P
GGG AAG GGG CTG GAG TGG ATT GGG AGT TTC TAT AGT AGT AGT GGG AAC ACC TAC TAC AAC CCC
    189                198                207                216                225                234                243

S  L  K  S  Q  V  T  I  S  T  D  T  S  K  N  Q  F  S  L  K  L
TCC CTC AAG AGT CAA GTC ACC ATT TCA ACA GAC ACG TCC AAG AAC CAG TTC TCC CTG AAG CTG
    252                261                270                279                288                297                306

N  S  M  T  A  A  D  T  A  V  Y  Y  C  V  R  D  R  L  F  S  V
AAC TCT ATG ACC GCC GCG GAC ACG GCC GTG TAT TAC TGT GTG AGA GAT CGT CTT TTT TCA GTT
    315                324                333                342                351                360                369

V  G  M  V  Y  N  N  W  F  D  V  W  G  P  G  V  L  V  T  V  S
GTT GGA ATG GTT TAC AAC AAC TGG TTC GAT GTC TGG GGC CCG GGA GTC CTG GTC ACC GTC TCC
    378                387                396                405                414                423                432

S  A  S  T  K  G  P  S  V  F  P  L  A  P  S  S  K  S  T  S  G
TCA GCT AGC ACC AAG GGC CCA TCG GTC TTC CCC CTG GCA CCC TCC TCC AAG AGC ACC TCT GGG
    441                450                459                468                477                486                495

G  T  A  A  L  G  C  L  V  K  D  Y  F  P  E  P  V  T  V  S  W
GGC ACA GCG GCC CTG GGC TGC CTG GTC AAG GAC TAC TTC CCC GAA CCG GTG ACG GTG TCG TGG
    504                513                522                531                540                549                558

N  S  G  A  L  T  S  G  V  H  T  F  P  A  V  L  Q  S  S  G  L
AAC TCA GGC GCC CTG ACC AGC GGC GTG CAC ACC TTC CCG GCT GTC CTA CAG TCC TCA GGA CTC
    567                576                585                594                603                612                621

Y  S  L  S  S  V  V  T  V  P  S  S  S  L  G  T  Q  T  Y  I  C
TAC TCC CTC AGC AGC GTG GTG ACC GTG CCC TCC AGC AGC TTG GGC ACC CAG ACC TAC ATC TGC
    630                639                648                657                666                675                684

N  V  N  H  K  P  S  N  T  K  V  D  K  K  A  E  P  K  S  C  D
AAC GTG AAT CAC AAG CCC AGC AAC ACC AAG GTG GAC AAG AAA GCA GAG CCC AAA TCT TGT GAC
    693                702                711                720                729                738                747

K  T  H  T  C  P  P  C  P  A  P  E  L  L  G  G  P  S  V  F  L
AAA ACT CAC ACA TGC CCA CCG TGC CCA GCA CCT GAA CTC CTG GGG GGA CCG TCA GTC TTC CTC
    756                765                774                783                792                801                810

F  P  P  K  P  K  D  T  L  M  I  S  R  T  P  E  V  T  C  V  V
TTC CCC CCA AAA CCC AAG GAC ACC CTC ATG ATC TCC CGG ACC CCT GAG GTC ACA TGC GTG GTG
    819                828                837                846                855                864                873

V  D  V  S  H  E  D  P  E  V  K  F  N  W  Y  V  D  G  V  E  V
GTG GAC GTG AGC CAC GAA GAC CCT GAG GTC AAG TTC AAC TGG TAC GTG GAC GGC GTG GAG GTG
  
```

FIGURE 5b (Continued)

| 882 | | | 891 | | | 900 | | | 909 | | | 918 | | | 927 | | | 936 | | | |
|------|-----|-----|------|-----|-----|------|-----|-----|------|-----|-----|-----|------|-----|-----|------|-----|-----|------|-----|--|
| H | N | A | K | T | K | P | R | E | E | Q | Y | N | S | T | Y | R | V | V | S | V | |
| CAT | AAT | GCC | AAG | ACA | AAG | CCG | CGG | GAG | GAG | CAG | TAC | AAC | AGC | ACG | TAC | CGT | GTG | GTC | AGC | GTC | |
| 945 | | | 954 | | | | 963 | | | 972 | | | 981 | | | 990 | | | 999 | | |
| L | T | V | L | H | Q | D | W | L | N | G | K | E | Y | K | C | K | V | S | N | K | |
| CTC | ACC | GTC | CTG | CAC | CAG | GAC | TGG | CTG | AAT | GGC | AAG | GAG | TAC | AAG | TGC | AAG | GTC | TCC | AAC | AAA | |
| 1008 | | | 1017 | | | 1026 | | | 1035 | | | | 1044 | | | 1053 | | | 1062 | | |
| A | L | P | A | P | I | E | K | T | I | S | K | A | K | G | Q | P | R | E | P | Q | |
| GCC | CTC | CCA | GCC | CCC | ATC | GAG | AAA | ACC | ATC | TCC | AAA | GCC | AAA | GGG | CAG | CCC | CGA | GAA | CCA | CAG | |
| 1071 | | | 1080 | | | 1089 | | | 1098 | | | | 1107 | | | 1116 | | | 1125 | | |
| V | Y | T | L | P | P | S | R | D | E | L | T | K | N | Q | V | S | L | T | C | L | |
| GTG | TAC | ACC | CTG | CCC | CCA | TCC | CGG | GAT | GAG | CTG | ACC | AAG | AAC | CAG | GTG | AGC | CTG | ACC | TGC | | |
| 1134 | | | 1143 | | | 1152 | | | 1161 | | | | 1170 | | | 1179 | | | 1188 | | |
| V | K | G | F | Y | P | S | D | I | A | V | E | W | E | S | N | G | Q | P | E | N | |
| GTG | AAA | GGC | TTC | TAT | CCC | AGC | GAC | ATC | GCC | GTG | GAG | TGG | GAG | AGC | AAT | GGG | CAG | CCG | GAG | | |
| 1197 | | | 1206 | | | 1215 | | | 1224 | | | | 1233 | | | 1242 | | | 1251 | | |
| N | Y | K | T | T | P | P | V | L | D | S | D | G | S | F | F | L | Y | S | K | L | |
| AAC | TAC | AAG | ACC | ACG | CCT | CCC | GTG | CTG | GAC | TCC | GAC | GGC | TCC | TTC | TTC | CTC | TAC | AGC | AAG | | |
| 1260 | | | 1269 | | | 1278 | | | 1287 | | | | 1296 | | | 1305 | | | 1314 | | |
| T | V | D | K | S | R | W | Q | Q | G | N | V | F | S | C | S | V | M | H | E | A | |
| ACC | GTG | GAC | AAG | AGC | AGG | TGG | CAG | CAG | GGG | AAC | GTC | TTC | TCA | TGC | TCC | GTG | ATG | CAT | GAG | | |
| 1323 | | | 1332 | | | 1341 | | | 1350 | | | | 1359 | | | 1368 | | | 1377 | | |
| L | H | N | H | Y | T | Q | K | S | L | S | L | S | P | G | K | | | | | | |
| CTG | CAG | AAC | CAC | TAC | ACG | CAG | AAG | AGC | CTC | TCC | CTG | TCT | CCG | GGT | AAA | TGA | | | | | |
| 1386 | | | 1395 | | | 1404 | | | 1413 | | | | 1422 | | | 1431 | | | | | |

Figure 6

Competitive Binding of CTLA-4Ig-Biotin to B7-1 Transfected CHO Cells
in Presence of P16C10 MA b, CTLA-4Ig and B7-1Ig Fusion Proteins

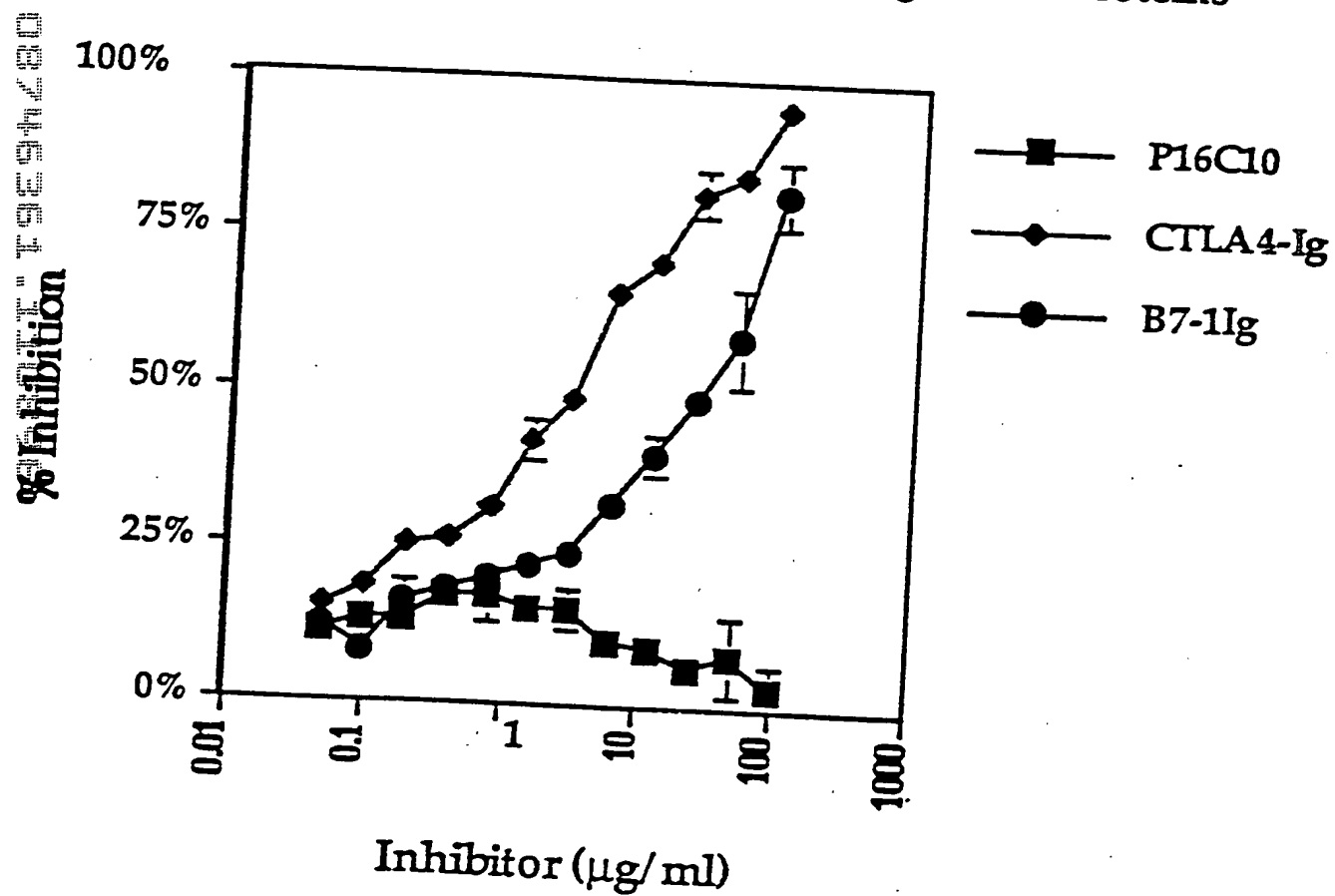


Figure 7

Competitive Binding of P16C10-Biotin to B7-1 Transfected CHO Cells
in Presence of P16C10 MAb, CTLA-4Ig and B7-1Ig Fusion Proteins

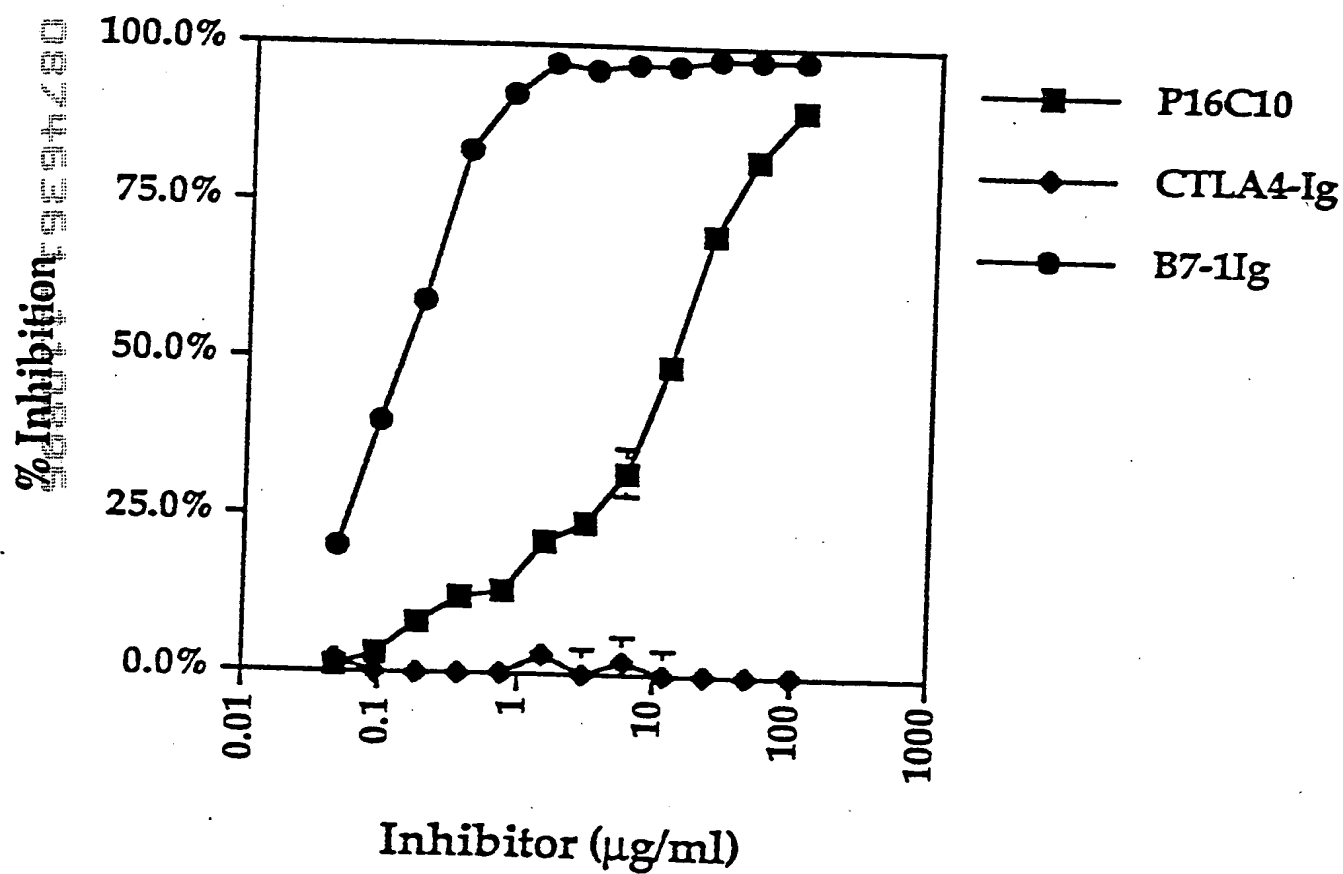


Figure 8

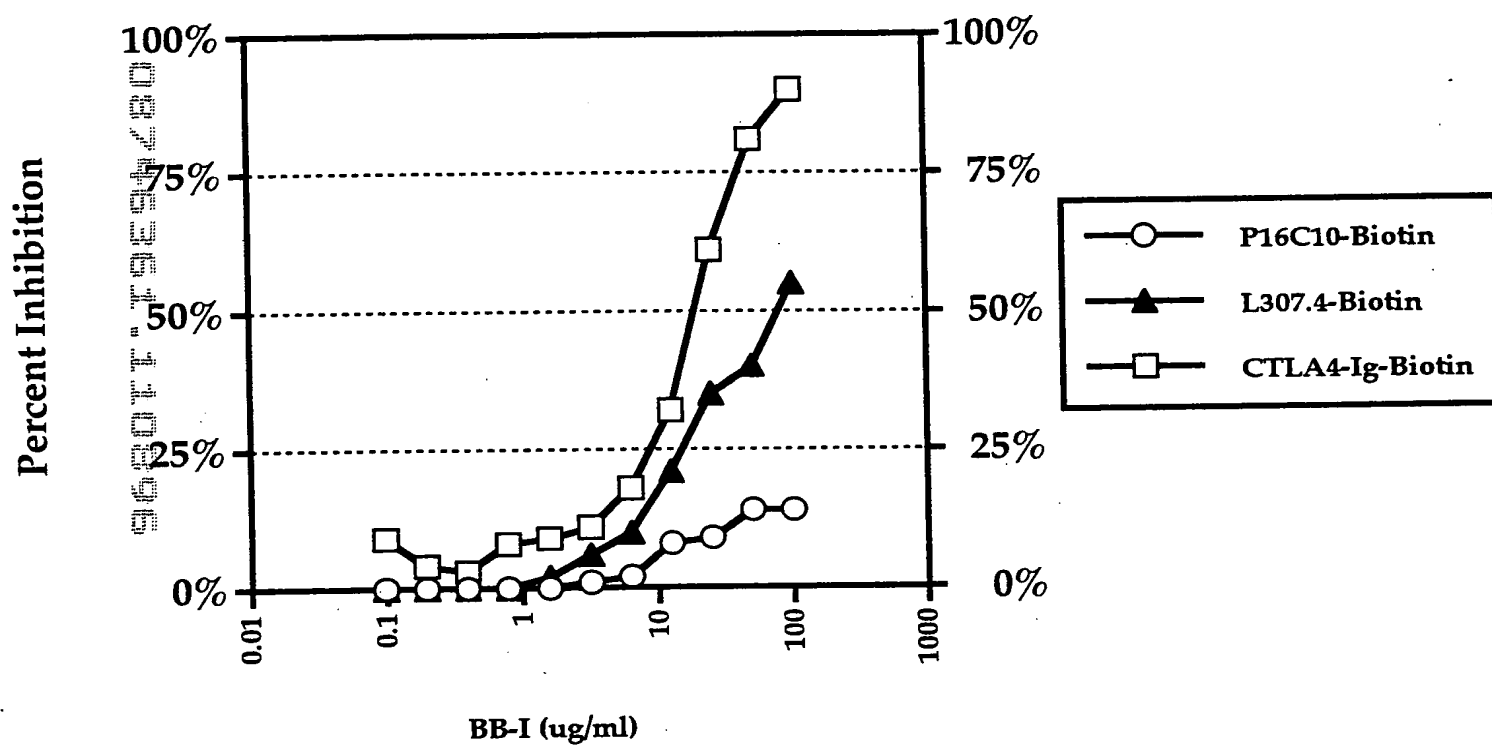


Figure 9

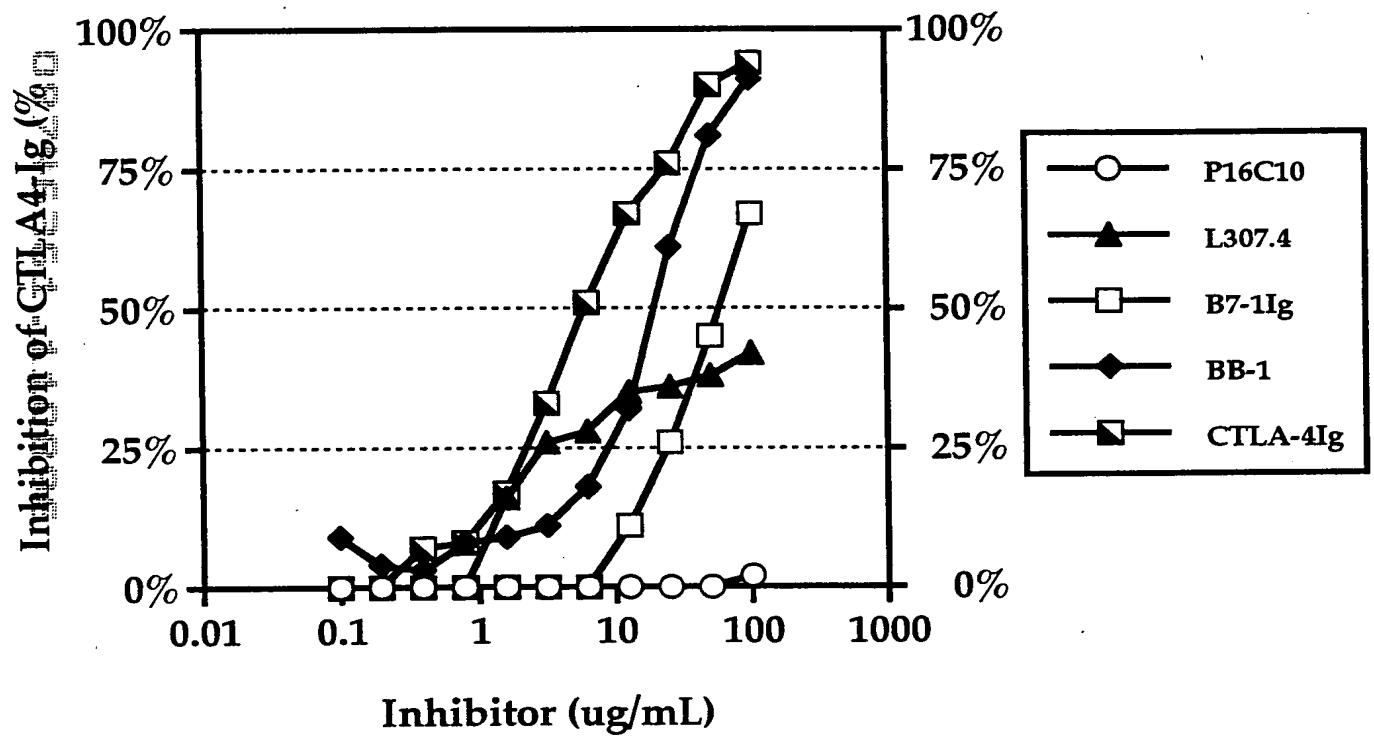


Figure 10

Competitive Inhibition of Radiolabeled B7-1Ig Binding to CD28 Receptors on Isolated Non-Activated Peripheral Blood T Cells using Unlabeled Binding Proteins Recognizing Either B7-1 or CD28

